



Losing one third of the fleet

The Australian CH-47 capability

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CH-47D MEAO
May 2011





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ADVANCED TANDEM ROTORCRAFT FLIGHT PRINCIPLES




Australian Government
Department of Defence
Defence Science and Technology Organisation



Global Services & Support

CH-47
Service Note

Number: 145-092

Date: February 27, 2012

Model: CH-47D/SD, CH-47J, HC-Mk2/2a/3/4

ATA System: 22-00 Automatic Flight Control System

SUBJECT: Advanced Flight Control System (AFCS) Flying Qualities

The purpose of this Service Note is to convey pertinent information to operators of the CH-47 Chinook aircraft. This Service Note is a Boeing Engineering recommendation and should not be considered a directive.

DESCRIPTION

This Service Note is issued to enhance the safety of the CH-47 fleet by sharing lessons learned resulting from a customer operating a Chinook aircraft with an inattentive flying technique.

Boeing received a report from a CH-47D model Chinook operator indicating that pilots were flying the aircraft utilizing an unacceptable pilot technique. The pilots had historically been instructed to allow the AFCS to correct un-commanded pitch oscillations due to atmospheric turbulence and other disturbances, by not applying input during any pitch oscillations.

Boeing worked with this operator and advised them that pilots flying the aircraft must actively arrest any pitch rate greater than $\pm 10^\circ/\text{sec}$. If the pilot does not respond promptly to these un-commanded pitch oscillations the AFCS may become saturated, resulting in a dangerous and unrecoverable situation. Boeing also recommends that pilots not allow large un-commanded pitch attitude deviations to develop even if the un-commanded pitch attitude deviations occur at a relatively low pitch rate. Pilots should not allow un-commanded pitch attitude deviations larger than approximately $\pm 5^\circ$ to develop without attempting to correct them. Boeing recommends that flying pilots always maintain an attentive flying technique, particularly when there is a possibility of pitch disturbances due to gusts, updrafts or any other factors such as rotor wake interference from other aircraft.

Boeing is providing this information to ensure that other CH-47 operators are not applying these unsafe flying techniques. Boeing recommends operating the aircraft in accordance with the operators manual, maintaining control of the aircraft at all times.

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DIRECT ALL INQUIRES TO THE ATTENTION OF CHINOOK FLEET SUPPORT

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